

WHAT IS CLAIMED IS:

1. A communication apparatus with an address translation function located between terminals, which communicate over an IP (Internet Protocol) network, for processing different types of data for communication, wherein in the IP network an address uniquely identifying a called party is a first address and an address used in a closed network is a second address, said apparatus comprising:

a first control circuit that sends destination information indicating a destination and a call instruction, which are included in the data, and a reception instruction;

an information storage that stores therein the first address to which the second address is made to correspond with IP address translation, information indicating which address, first or second, is to be set in the call instruction and the reception instruction, and port information used for identifying applications;

a second control circuit that determines which address, first or second, is set as a destination address in a call message generated based on information read out from said information storage and that performs control according to a standard;

a codec circuit that performs codec processing for supplied data; and

an interface circuit that connects the IP network to said apparatus.

2. The apparatus in accordance with claim 1, wherein said apparatus conforms to Recommendation H.323 (Ver. 2, February 1998) of International Telecommunication Union Telecommunication Standardization Sector (ITU-T).

3. The apparatus in accordance with claim 1, wherein said second control circuit comprises:

a call control circuit;

an H.245 control circuit that conforms to a standard of Recommendation H.245 (Ver. 3 January 1998) of International Telecommunication Union Telecommunication Standardization Sector (ITU-T);

a RAS (Registration, Admissions, and Status) control circuit that controls a registration, admission, and status of the information; and

an address determination circuit that determines which address, first or second, is to be set up for the destination address.

4. The apparatus in accordance with claim 2, wherein said second control circuit comprises:

a call control circuit;

an H.245 control circuit that conforms to a standard of Recommendation H.245 (Ver. 3 January 1998) of International Telecommunication Union Telecommunication Standardization Sector (ITU-T);

a RAS control circuit that controls a registration, admission, and status of the information; and

an address determination circuit that determines which address, first or second, is to be set up for the destination address.

5. The apparatus in accordance with claim 1, wherein said information storage contains a value as port difference information, said value being used for shifting a port number to uniquely identify each device even if the port information is the same.

6. The apparatus in accordance with claim 2, wherein said information storage contains a value as port difference information, said value being used for shifting a port number to uniquely identify each device even if the port information is the same.

7. The apparatus in accordance with claim 3, wherein said information storage contains a value as port difference information, said value being used for shifting a port number to uniquely identify each device even if the port information is the same.

8. The apparatus in accordance with claim 4, wherein said information storage contains a value as port difference information, said value being used for shifting a port number to uniquely identify each device even if the port information is the same.

9. A multimedia communication method of processing different types of data over an IP network and of performing a plurality of types of data communication between terminals while using an IP address translation function, wherein in the IP network an address uniquely identifying a called party is a first address and an address used in a closed network is a second address, said method comprising:

a first step of setting destination information of a call destination, one of the terminals being the call destination;

a second step of determining if address translation is to be performed for an address included in a call message created based on the destination information;

a third step of determining if the determined destination is represented by the first address or the second address;

a fourth step of setting an IP address, produced by the address translation, in local device information unique to the terminal when the determined result indicates the first address;

a fifth step of setting the local device information when the determined result indicates the second address;

a sixth step of sending the call message set up in the above steps;

a seventh step of checking if a response message is received from another terminal;

an eighth step of performing negotiation between the terminals in response to the reception;

a ninth step of checking if the negotiation is successful;

a tenth step of communicating data between the terminals when the negotiation is successful and for performing codec processing on the data sent or received; and

an eleventh step of releasing the call if, after completion of the communication, the response message was not received or the negotiation failed.

10. The method in accordance with claim 9, wherein said fourth step comprises the sub-steps of:

setting the IP address, produced by the address translation, in the local device information unique to the terminal; and

setting port information used for identifying each terminal.

11. The method in accordance with claim 10, wherein the port information uses a port number identifying each terminal and a port difference that is assigned by shifting the local terminal port number by a predetermined value.

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